

**CLAIMS:**

1. A fluid heater capable of heating a flow of fluid to a desired temperature, said fluid heater having a fluid inlet for connection to a source of fluid, fluid heating means connected to the inlet, and an outlet for delivering heated fluid supplied by the fluid heating means, wherein there is a temperature controlled pressure regulating valve between the inlet and the outlet, the temperature controlled pressure regulating valve having flow restriction means capable of regulating the flow of heated fluid delivered to the outlet, and heat exchange means allowing the temperature controlled pressure regulating valve to be in heat exchange with the fluid heating means or with the heated fluid leaving the fluid heating means, such that heating or cooling of the temperature controlled pressure regulating valve will cause the flow restriction means to open or close to allow an increase or decrease in the flow of heated fluid leaving the outlet, to thereby control the temperature of the heated fluid leaving the outlet.
2. A portable hand tool capable of heating a flow of water to a temperature suitable for killing vegetation, said hand tool having a water inlet for connection to a source of water, water heating means connected to the inlet, an outlet nozzle for delivering heated fluid supplied by the water heating means, wherein there is a temperature controlled pressure regulating valve between the inlet and the outlet nozzle, the temperature controlled pressure regulating valve having flow restriction means capable of regulating the flow of heated fluid delivered to the outlet nozzle, and heat exchange means allowing the temperature controlled pressure regulating valve to be in heat exchange with the water heating means or with the heated fluid leaving the water heating means, such that heating or cooling of the temperature controlled pressure regulating valve will cause the flow restriction means to open or close to allow an increase or decrease in the flow of heated fluid leaving the nozzle, to thereby control the temperature of the heated fluid leaving the nozzle.
3. A portable hand tool as claimed in claim 2, wherein the temperature controlled pressure regulating valve is situated between the water heating means and the nozzle.

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4. A portable hand tool as claimed in claim 2, wherein the temperature controlled pressure regulating valve has a pressure chamber which acts on a moveable member, the pressure chamber containing a temperature responsive substance capable of generating a pressure within the pressure chamber to move the moveable member to regulate the opening or closing of the flow restriction means in response to changes in the temperature of the substance in the pressure chamber.
5. A portable hand tool as claimed in claim 4, wherein the substance is a liquid and/or a gas.
6. A portable hand tool as claimed in claim 4, wherein the substance is a mixture of water and air.
- 10 7. A portable hand tool as claimed in claim 5, wherein the movable member is a diaphragm.
8. A portable hand tool as claimed in claim 6, wherein the water heating means includes one or more electrical heating elements in or attached to a heat sink.
- 15 9. A portable hand tool as claimed in claim 8, wherein a thermal cut-out is mounted on or in the heat sink and is adapted to switch off the electric heating elements if the temperature of the cut-out exceeds a predetermined value.
10. A portable hand tool as claimed in claim 9, wherein the heat sink is an extrusion of aluminium and contains apertures or passageways for the heating elements and one or more fluid passageways having a large surface area to volume ratio.

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